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METROPOLITAN ROADS

A SUMMARY

PREPARED BY : THE TRANSPORTATION DIVISION
METROPOLITAN TORONTO PLANNING DEPARTMENT

METROPOLITAN PLAN REVIEW

The Municipality of Metropolitan Toronto

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INFORMATION TO THE READER

This report is one of a series of background and proposal studies undertaken in the general area of "transportation" as part of the Metropolitan Plan Review.

All members of the community are invited to comment on the matters presented. It is hoped that individuals and organizations with particular expertise on items raised here, will convey their conclusions, concerns and recommendations. These comments will be considered and reported in the preparation of policy recommendations which will follow.

Submissions should be sent to:

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The "Metropolitan Plan Review" is a program to review the Official Plan For The Urban Structure: Metropolitan Toronto. The program was adopted by Metropolitan Council in March of 1986 and, is available in printed form as "Report No.1: Program, Metropolitan Plan Review". Copies are available from the above address.

Metropolitan Roads
Executive Summary

1.0 INTRODUCTION

The Official Plan for the Urban Structure of Metropolitan Toronto (hereinafter referred to as the Official Plan) outlines the policies and programs for the development of the Metropolitan transportation system. This system consists of a transit network (buses, streetcars, intermediate capacity transit and subway) and a road network (urban expressways and arterial roads) which are supported by Provincial (highways and inter-regional transit - GO) and local (collector and local roads) transportation networks.

The current Official Plan promotes a urban structure that is based on the development of a transportation system in which the transit network receives a higher profile than the road network. This policy direction is viewed as desirable in the context of today's concerns with environmentally sustainable development.

However, future population and employment growth in the Greater Toronto Area are expected to result in increasing levels of congestion on the region's arterial roads and expressways, which may ultimately impact the quality of life enjoyed by area residents and the economic performance of the region. It is unlikely that additions to the existing expressways will be constructed in the foreseeable future and, therefore, if the transportation system is to cope with future auto travel demands emphasis will have to be focussed on the Metropolitan arterial road network.

This paper examines the future conditions that are expected to impact the Metropolitan road network, the challenges and issues that will have to be addressed as a result of the future conditions and outlines new and expanded Official Plan policies which place greater emphasis on the planning and operation of the Metropolitan road system.

2.0 CONTEXT

Data from the Transportation Tomorrow Survey conducted in 1986 shows that approximately 8.5 million person trips were made on a daily basis in the Greater Toronto Area. Trips with an origin and/or destination within Metropolitan Toronto accounted for 60% of the regional total (5.1 million trips). Translating this data into automobile trips (and including daily truck movements) produces an estimate of approximately 3.2 million vehicle trips made every weekday in Metropolitan Toronto in 1986.

Historically, the following information summarizes the usage of Metropolitan roads:

- between 1975 and 1987 the largest increases in both total travel demand (106.2%)and vehicular travel demand (111.2%) have occurred at the Metropolitan boundary with the adjacent regions;

- auto usage is predominant in the suburban areas and declines as a percentage of overall travel demand the closer the count is taken to the Central Area of the City of Toronto;

- trucks account for 10% to 20% of daily traffic on Metropolitan roads and the rate of increase in truck traffic is higher than auto traffic;

- the number of trips made per person has increased from 1.3 per day in 1964 to 2.0 per day in 1986, an increase of 53.8 per cent;

- auto occupancies have decreased in all areas of Metropolitan Toronto; and

- the number of reportable accidents has risen in 1986 and 1987.

The overall message from this information is that traffic volumes have been increasing at a rate faster than employment and population growth, with resulting increased levels of congestion.

Future population in the region is predicted to increase by 40% between 1986 and 2011 while employment is predicted to increase by 44.4%. The majority of this growth is expected to occur in the regional municipalities outside Metropolitan Toronto. At the Metropolitan boundary auto and person trips are expected to increase 101.4% and 95.2%, respectively, to 2011 while at the Central Area Cordon the increases are expected to be only 12.3% and 8.6%, respectively.

The implications of these forecasts are that congestion on the road network will continue to grow and because the majority of trips will be longer distanced inter-regional trips congestion on the highway system is expected to worsen. As congestion worsens on the highway network, the ability of the arterial road network to accommodate the additional demands will be tested.

3.0 CHALLENGES

The following challenges for the Metropolitan road system were identified:

- o Congestion
  - pressures resulting from increased congestion will lead to increased wear and tear on the existing road infrastructure and to the need to examine improvements to the system;

- o Incompleted Road Network
  - some of the most important links in the existing planned road network (Figure 8 in the Official Plan) have not been constructed and these

projects will have to be undertaken in order to complete a basis grid network of roads. Assuming that these facilities are constructed, improvements to the system required to accommodate future demands will be limited to road widenings and to measures designed to maximize the capacity of the road system;

- o Competing demands for Existing Road Rights-of-Way
  - the growth in the number and extent of non-road transportation related demands for space within existing roads rights-of-way are affecting the primary function of the rights-of-way which is the movement of people and goods;

- o Road and Pedestrian Safety
  - recent experience has indicated that as congestion worsens drivers' driving habits deteriorate and future road improvements may have to be considered to reduce or eliminate identified safety problems;

- o Goods Movement
  - traffic congestion is affecting the ability to move goods within the Metropolitan area and as congestion increases the cost of moving goods will also increase. Of particular importance is the movement of dangerous goods by both truck and rail;

- o Maintenance and Rehabilitation
  - the aging road network will require adequate levels of funding to maintain the infrastructure in a cost effective manner. With ever increasing amounts of traffic the deterioration of the roads will occur at a faster rate, leading to the need for even more frequent maintenance work; and

o Funding

- since 1985 the Province has capped the level of its subsidy for Metropolitan road works at a level much less than 50% of the identified needs. The lower funding levels affect all aspects of the system by delaying new roads and road widenings and differing necessary rehabilitative functions. Future funding levels will determine how the system will ultimately operate and if it will be able to cope with future demands.

4.0 ISSUES

The following issues were identified upon which future action should be considered in the review of the Official Plan.

o How to deal with Existing and Future Road Congestion

- two approaches appear available to deal with future increases in demand:
  (i) develop programs and strategies to achieve maximum usage out of the existing system; and
  (ii) implement infrastructure improvements

  Limitations on the extent of improvements to the road system also necessitate that actions be undertaken to modify the future propensity for automobile use;

- the Official Plan must recognize that an efficient transportation system is vital to the region and that it must be an integrated network of both roads and transit;

- limitations on funding and the physical ability to expand the existing infrastructure lead to considering as a priority the following strategies to gain the optimum use of the existing road network:
  (a) Transportation System Management (TSM) measures;
  (b) Transit Priority;
  (c) High Occupancy Vehicle (HOV)/Bus Lanes; and
  (d) Demand Management; and

- notwithstanding the benefits of the above programs some infrastructure improvements may be warranted because of demand or because of road and pedestrian safety concerns. The types of improvements to be considered are:

  (a) new roads, either as currently identified in the Official Plan or identified through on-going review of needs; and
  (b) widenings of existing roads;

o Goods Movement
- Council should recognize the importance of the movement of goods and adopt appropriate operational policies to ensure goods movement is considered in future planning;
- appropriate policies should be developed to ensure the safe transportation of dangerous goods;

o Limited Rights-of-Way
- modifications to the Official Plan should be considered to allow flexibility in the rights-of-way policies which will permit staff to react to special circumstances as they arise;

- o Non-Transportation Related Issues
  - recent initiatives such as increased densities along arterial roads, landscaping and urban design are not directly tied to the primary function of the road system, but these issues must be considered in the overall planning and operation of the network;

- o Environmental Assessment
  - problems have arisen with the current application of the Environmental Assessment Act and steps are being taken to review and address these problems. However, Official Plan policies must be structured to ensure compliance with the Act;

- o Maintenance and Rehabilitation
  - any improvement to the road system gained through the application of new policies and programs could be lost if the existing infrastructure falls into a state of disrepair. The maintenance and rehabilitation function must, therefore, be the highest priority of Council; and

- o Funding
  - lack of apropriate funding will lead to an overall worsening of congestion no matter what policies or programs are included in the Official Plan.

5.0 SUGGESTED AMENDMENTS TO EXISTING OFFICIAL PLAN POLICY STATEMENTS

The Official Plan, although containing a range of specific and detailed provisions is primarily a strategic instrument which outlines the broad policies and programs to be pursued in defining the form and function of the Metropolitan Toronto urban structure. The broad policies with respect to the

definition of the Metropolitan road system are currently contained in the plan; however, due to the ongoing growth in urban traffic, new and strengthened policies are required to outline the future directions needed to accommodate or at least manage the growth.

As noted in Section 2.0 of this paper total travel and in particular vehicular travel has increased in all areas of Metropolitan Toronto since 1975. In 1986 it was estimated that approximately 3.2 million vehicle trips were made within Metropolitan Toronto on a daily basis. Future projections of population and employment growth in the Greater Toronto Area (40% growth in population and 44% growth in employment) imply that current road congestion will worsen in future years. The most recent projection of future travel demand indicates growth in peak hour auto travel between 1981 and 2011 of from 12% in the central areas of Metropolitan Toronto, to 25% in the suburban areas, to over 100% across the boundaries between Metropolitan Toronto and the surrounding regional municipalities.

While the existing Official Plan provides for establishment and definition of the Metropolitan road system, it does not explicitly recognize the need for an integrated system of both roads and transit. In light of the worsening congestion problems throughout the Metropolitan area, the Official Plan should be modified to express support for an integrated transportation system which includes properly planned and maintained road and transit networks. It is therefore suggested that:

1. **a sub-section be included in Section 6.B Objectives to outline Council's support of an integrated transportation network.**

New policies for inclusion in the Official Plan must be reviewed to provide the necessary policy directions for development of plans and programs to accommodate the growth in future traffic volumes. Specifically, existing

Official Plan statements tend to concentrate on the provision of new elements to the transportation network. As noted earlier in this paper the nature of the Metropolitan urban environment limits the ability to provide new road infrastructure and, therefore, the necessity to optimize the use of the existing system is paramount. It is, therefore, suggested that:

2. **a section be included in the Official Plan which outlines Council's intent to optimize the use of the road system infrastructure, including special emphasis on intersection improvements, more efficient operating strategies, and the consideration of High Occupany Vehicle (HOV) lanes on all new road links and road widenings;**

3. **a section be included in the Official Plan which indicates the highest priority of Council be the maintenance and rehabilitation of existing transportation infrastructure; and**

4. **a section be included in the Official Plan to recognize the importance of the ability, based on appropriate study, to widen existing Metropolitan roads.**

While it is recognized that there are limited opportunities to provide new road links within Metropolitan Toronto, the future roads identified on Figures 8 and 9 of the Plan will eventually have to be constructed if future traffic volumes are to be accommodated. It should also be recognized that there may be other road links required that are not shown on Figures 8 and 9 and that the Figures may be amended from time to time to include those new roads. The current wording of Sections 6.B.4 and 6.E.2 of the Plan would seem to indicate that the road network as shown on Figures 8 and 9 is the complete network required to serve the area. This, of course, may not be the case. In addition, Section 6.E.1 indicates Council's intent not to support additional expressway facilities within Metropolitan Toronto. The growing long distance inter-regional travel demand and goods movement components of the traffic stream may in future require a re-examination of potential need for new expressways. Council should not restrict itself from examining

this potential and in any event Section 6.E.1 is redundant since amendments to Figures 8 and 9 of the Plan would be required to implement any new expressway ever contemplated. Therefore, it is suggested that:

5. **Sections 6.B.4 and 6.E.2 be modified to indicate that additions to the Metropolitan road network may be included on Figures 8 and 9 based upon appropriate review and study as provided for in Section 6.C of the Plan; and**

6. **Section 6.E.1 be removed from the Plan.**

Existing Official Plan policies with respect to the acquisition of road rights-of-way are too restrictive and do not permit sufficient flexibility to deal with the increasing demands for use of road rights-of-way (e.g. utilities, landscaping, street furniture) and to deal with necessary incremental acquisition of designated rights-of-way width. It is therefore suggested that:

7. **Sections 6.E.3 and 11.C.4 be modified to add flexibility to the road rights-of-way acquisition policies.**

Section 6.B.6 of the Official Plan outlines Council's intent with respect to the environmental impact of new or improved transportation system elements. Since all such improvements are subject to the Environmental Assessment Act the Plan should recognize the statutory requirements of the Act. It is therefore suggested that:

8. **Section 6.B.6 be modified to reflect the statutory requirements of the Environmental Assessment Act.**

The success of the T.T.C.'s surface transit network to move large numbers of people in the future will be tied closely with the ability of the buses and streetcars to operate on the road system. Section 6.A.2 of the Plan states

that Council "...shall encourage the preferential treatment on transit vehicles on appropriate arterial roads...". However, given the future importance of transit priority, it would be appropriate to strengthen the Council's commitment. It is therefore suggested that:

9. **a section be included in 6.B Objectives to outline Council's intent to actively pursue transit priority measures on Metropolitan roads.**

The importance of goods movement to the Metropolitan economy cannot be overstated. Increasing congestion will result in higher costs for goods movement and could impact on the economic viability of certain sectors of the Metropolitan economy. Council should recognize goods movement as an important component of overall travel demand in the area and policies should be considered for inclusion in the Official Plan which ensure the needs of goods movement are considered in planning and operation of the Metropolitan road system.

Council should also consider policies that clearly outline that the objective of Council is to ensure the safe movement of dangerous goods within Metropolitan Toronto, when those goods originate or are destined within Metropolitan Toronto, and to relocate through movements of dangerous goods outside of Metropolitan Toronto.

It is therefore suggested that:

10. **a section be included in 6.B Objectives to outline Council's intent to consider the needs of goods movement in the planning and operation of the Metropolitan road system; and**

11. **a section be in the Official Plan that outlines Council's intent to ensure the safe movement of dangerous goods within Metropolitan Toronto and to clearly indicate Council's desire to relocate through movements of dangerous goods outside Metropolitan Toronto.**